39. The method of claim 38 wherein determination of the thymus' susceptibility to activation includes comparing the amounts of indicator in blood samples such that a difference in the measured amount of the indicator in a sample obtained from the patient subsequent to the disruption as compared to the amount of indicator in a blood sample obtained from the patient prior to the disruption indicates whether activation of the patient's thymus has occurred.

40. The method of claim 39 wherein the difference in concentration of the indicator is diagnostic of the susceptibility of the patient to thymic activation, or is diagnostic of the level of activation of the patient's thymus, or combinations thereof.

41. The method of claim 39 wherein the level of indicator is monitored in samples obtained prior to, during, or after administration of a blocker of sex steroid activity.

42. The method of claim 39 wherein the difference is an increased amount of the indicator.

43. The method of claim 42 wherein the increase occurs within about one week of disruption of sex steroid mediated signaling to the patient's thymus.

44. The method of claim 43 wherein the increase occurs within about 4 to about 5 days of disruption of sex steroid mediated signaling to the patient's thymus.

45. The method of claim 44 wherein the increase occurs within about 2 to about 3 days of disruption of sex steroid mediated signaling to the patient's thymus.

46. The method of claim 45 wherein the increase occurs within about 24 hours of disruption of sex steroid mediated signaling to the patient's thymus.

47. The method of claim 46 including identification of one or more thymic factors or one or more indicators of thymic function.

48. The method of claim 47 wherein identification of one or more thymic factors or indicators of thymic function includes detecting one or more differences in the concentration of a protein in a blood sample taken after disruption as compared to the concentration of the protein in a sample taken prior to disruption.

49. The method of claim 48 wherein the detected difference identifies a new indicator of thymic function.

50. The method of claim 49 wherein identification of the thymic factor or the indicator of thymic function is revealed using solid phase amino acid sequencing.

51. The method of claim 48 wherein the blood samples are treated to separate out plasma and an analysis is performed on the plasma.

52. The method of claim 48 wherein the protein analysis includes performing two-dimensional gel electrophoresis.

53. The method of claim 49 wherein the indicator is a thymopoietic hormone.

54. The method of claim 53 wherein the thymopoietic hormone is selected from the group consisting of a thymulin, a thymosin, a thymopoietin, or combinations thereof.

55. The method of claim 53 including the step of monitoring one or more population of T cells.

56. The method of claim 55 wherein the one or more population of T cells is a new population of cells in the patient detectable by T cell receptor excision circle (TREC) analysis.

57. The method of claim 53 wherein the thymopoietic hormone is a diagnostic indicator of thymic function.

58. The method of claim 57 wherein the diagnostic indicator is a known marker.

59. The method of claim 49 wherein the indicator is thymulin at a concentration of greater than about 0.4 mg/kg measured in a test sample obtained from the patient subsequent to administration of a sex steroid blocker.

60. The method of claim 63 wherein the concentration is greater than about 4.33 mg/kg.

61. The method of claim 38 wherein disruption of sex steroid mediated signaling to the patient's thymus includes blocking of one or more sex steroid receptors within the patient's thymus.

62. The method of claim 38 wherein disruption of the sex steroid mediated signaling to the thymus includes the inhibition of sex steroid production in the patient.

63. The method of claim 38 wherein disruption of sex steroid mediated signaling to the patient's thymus is by chemical castration of the patient.

64. The method of claim 38 disruption of sex steroid mediated signaling lowers the concentration of a sex steroid in a patient.

65. The method of claim 61 wherein the sex steroid blocker is selected from the group consisting of LHRH analogs, LHRH-R agonists, LHRH-R antagonists, anti-LHRH vaccines, anti-LHRH-R vaccines, anti-sex steroid vaccines, and combinations thereof.

66. The method of claim 65 wherein the vaccines are selected from the group consisting of active vaccines, passive vaccines, and combinations thereof.

67. The method of claim 65 wherein the LHRH analogs are LHRH-R agonists or LHRH-R antagonists and combinations thereof.

68. The method of claim 67 wherein the sex steroid blocker is an LHRH-R agonist selected from the group consisting of Buserelin, Cysterelin, Decapeptyl, Deslorelin, Gonadorelin, Goserelin, Histrelin, Leuprolide, Leuprorelin, Lutrelin, Meterelin, Nafarelin, Triptorelin, and combinations thereof.

69. The method of claim 67 wherein the sex steroid blocker is an LHRH-R antagonist selected from the group consisting of Eulexin, Abarelix, Cetrorelix, and combinations thereof.

70. The method of claim 67 wherein the LHRH analog comprises a dose of between about 0.01 mg/kg and about 10 mg/kg LHRH analog.

71. The method of claim 70 wherein the dose is between about 0.01 mg/kg and about 5 mg/kg.

72. The method of claim 70 wherein the sex steroid blocker is in a formulation suitable for oral, parenteral, subcutaneous, topical, intravenous or intramuscular administration, or a combination thereof.

73. The method of claim 72 wherein the formulation includes a slow-release or a time-release preparation.

74. The method of claim 67 wherein the LHRH analog is a 22.5 mg depot injection of Leucrin or a 10.8 mg Zoladex implant.

75. The method of claim 54 including the steps of:

a) sampling the patient's blood before and after disruption of sex steroid mediated signaling to the patient's thymus;

b) sorting a population of T cells in one or more blood sample obtained from the patient to obtain an enhanced population of T cells;

c) isolating the DNA of the cells in the sorted samples; and

d) performing PCR on the isolated DNA using at least one primer specific for TRECs.

76. The method of claim 75 including performing reverse transcription on the isolated DNA.

77. The method of claim 75 wherein the at least one primer specific for TRECS is selected from the group consisting of DNA SEQ ID NO: 1, DNA SEQ ID NO: 2, DNA SEQ ID NO: 3, DNA SEQ ID NO: 4 and combinations thereof.

78. The method of claim 75 wherein an increase in TRECs after inhibition indicates thymic activation.

79. The method of claim 39 further comprising the use of an assay selected from the group consisting of immunohistochemistry, immunohistology, immunofluorescence, mixed lymphocyte reaction, flow cytometry, cell sorting, bromodeoxyuridine (BrdU) incorporation, two-dimensional gel electrophoresis and combinations thereof.

80. A kit for use in determining the susceptibility of a thymus to activation comprising the following components:

one or more sex steroid blocker;

a reagent that can specifically bind to a thymopoietic hormone;

one or more oligonucleotide specific for TRECS; and

a carrier.

81. The kit according claim 80 wherein the one or more oligonucleotide is selected from the group consisting of DNA SEQ ID NO:1, DNA SEQ ID NO:2, DNA SEQ ID NO:3, DNA SEQ ID NO:4, and a combination thereof.--

**IN THE SPECIFICATION:**

On page 16, paragraph 0070, line 2, after "sex steroid analog," and before "preferably" please insert the word --or--.

On page 37, paragraph 0164, line 5 after "3 month" and before "depot" please insert therefore --(or 3 times one month)--.